

L Number	Hits	Search Text	DB	Time stamp
-	1	"20030093943"	USPAT; US-PGPUB	2004/10/30 09:48
-	1	"20030093943" and toluene	USPAT; US-PGPUB	2004/10/30 09:50
-	44	(antioxidant with thermal) and 44/\$.ccls.	USPAT; US-PGPUB	2004/10/30 09:51
-	9	(antioxidant with thermal) with (vitamin or tocopherol)	USPAT; US-PGPUB	2004/10/30 09:55
-	0	(antioxidant with thermal) with (vitamin or tocopherol) with food	USPAT; US-PGPUB	2004/10/30 09:55
-	0	(antioxidant with thermal) with (vitamin or tocopherol) with food	EPO; JPO; DERWENT	2004/10/30 09:55
-	0	((antioxidant with thermal) with (vitamin or tocopherol)) and food	EPO; JPO; DERWENT	2004/10/30 09:56
-	2	((antioxidant with thermal) and (vitamin or tocopherol)) and food	EPO; JPO; DERWENT	2004/10/30 09:57
-	111	((antioxidant with thermal) and (vitamin or tocopherol)) and food	USPAT; US-PGPUB	2004/10/30 11:08
-	23	44/\$.ccls. and (carotene or lycopene or leutin or betatene or carotenoid)	USPAT; US-PGPUB	2004/10/30 11:08

# STN Columbus

\* \* \* \* \* \* \* \* \* \* \* \* \* Welcome to STN International \* \* \* \* \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 JUL 12 BEILSTEIN enhanced with new display and select options,  
resulting in a closer connection to BABS  
NEWS 4 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display  
fields  
NEWS 5 AUG 02 CAplus and CA patent records enhanced with European and Japan  
Patent Office Classifications  
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!  
(Version 7.01 for Windows) now available  
NEWS 7 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage  
NEWS 8 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal  
status data from INPADOC  
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available  
NEWS 10 SEP 01 New pricing for the Save Answers for SciFinder Wizard within  
STN Express with Discover!  
NEWS 11 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX  
NEWS 12 SEP 27 STANDARDS will no longer be available on STN  
NEWS 13 SEP 27 SWETSCAN will no longer be available on STN  
NEWS 14 OCT 28 KOREPAT now available on STN  
  
NEWS EXPRESS OCTOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* \* \* \* \* \* \* \* \* STN Columbus \* \* \* \* \* \* \* \* \* \* \* \* \*

FILE 'HOME' ENTERED AT 17:00:22 ON 29 OCT 2004

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 17:00:37 ON 29 OCT 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December

STN Columbus

26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 29 Oct 2004 VOL 141 ISS 19  
FILE LAST UPDATED: 28 Oct 2004 (20041028/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s fuel and (vitamin e or tocopherol)  
340874 FUEL  
154939 FUELS  
389767 FUEL  
(FUEL OR FUELS)  
176528 VITAMIN  
49415 VITAMINS  
195026 VITAMIN  
(VITAMIN OR VITAMINS)  
1802584 E  
28667 VITAMIN E  
(VITAMIN(W) E)  
27205 TOCOPHEROL  
8044 TOCOPHEROLS  
29454 TOCOPHEROL  
(TOCOPHEROL OR TOCOPHEROLS)  
L1 45 FUEL AND (VITAMIN E OR TOCOPHEROL)  
  
=> s l1 and carotene  
27960 CAROTENE  
20157 CAROTENES  
38399 CAROTENE  
(CAROTENE OR CAROTENES)  
L2 2 L1 AND CAROTENE

=> d l2 1-2 all

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
Full Text  
AN 2003:334695 CAPLUS  
DN 138:336957  
ED Entered STN: 02 May 2003  
TI Corn oil processing and products comprising corn oil and corn meal obtained from corn  
IN Jakel, Neal T.; Kotowski, Doug; Ingvalson, Joel; Beaver, Michael J.; Ulrich, James F.; Amore, Francis; Tupy, Michael J.; Fox, Eugene J.; Patist, Alexander  
PA Renessen, LLC, USA  
SO U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 927,836.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM C11C001-00  
ICS A21D002-00  
NCL 554010000; 554020000; 426622000  
CC 17-9 (Food and Feed Chemistry)  
Section cross-reference(s): 18, 45, 51, 62  
FAN.CNT 10

STN Columbus

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003083512	A1	20030501	US 2002-47725	20020115
	US 6610867	B2	20030826		
	US 2002193617	A1	20021219	US 2001-927836	20010810
	US 6648930	B2	20031118		
	US 2003224496	A1	20031204	US 2003-368521	20030218
PRAI	US 2000-637843	A2	20000810		
	US 2001-927836	A2	20010810		
	US 1999-249280	A2	19990211		
	US 2002-47725	A2	20020115		
CLASS					
	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
	US 2003083512	ICM	C11C001-00		
		ICS	A21D002-00		
		NCL	554010000; 554020000; 426622000		
	US 2003083512	ECLA	A23D009/00; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105B; A23L001/30C; C08B030/10; C08L099/00; C11B001/04; C11B001/10; C11B003/00B; C12P007/06; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K110/; A23K001/10C; A23K001/14; A23K001/16G; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06		
	US 2002193617	ECLA	A23D009/00; C11B001/10; C11B003/00B; C12P007/06; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K110/; A23K001/10C; A23K001/14; A23K001/16G; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06		
	US 2003224496	ECLA	A23D009/00; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K001/10; A23K001/10C; A23K001/14; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06; C11B001/10; C11B003/00B; C12P		
AB	Corn oil and corn meal obtained from corn are included in useful products. The corn oil is extd. from the corn to form the corn meal. The corn grain process generally includes the steps of cracking corn grain having a total oil content of from about 3% to 30% by wt. and extg. the corn oil from the cracked corn grain. The corn oil is useful for making nutritionally enhanced edible oil or cooking oil, lubricants, biodiesel, fuel, cosmetics and oil-based or oil-contg. chem. products. The extd. corn meal is useful for making enhanced animal feed rations, snack food, blended food products, cosmetics, and fermn. broth additive.				
ST	corn meal oil manuf feed food fuel cosmetic				
IT	Fats and Glyceridic oils, biological studies				
	RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (animal; corn oil processing and products comprising corn oil and corn meal obtained from corn)				
IT	Food (bars; corn oil processing and products comprising corn oil and corn meal obtained from corn)				
IT	Diesel fuel substitutes (biodiesel; corn oil processing and products comprising corn oil and corn meal obtained from corn)				
IT	Oryza sativa (bran; corn oil processing and products comprising corn oil and corn meal obtained from corn)				
IT	Bakery products Triticum aestivum (byproducts; corn oil processing and products comprising corn oil and corn meal obtained from corn)				

STN Columbus

- IT Solvent extraction
    - (continuous; corn oil processing and products comprising corn oil and corn meal obtained from corn)
  - IT Food viscosity
    - (controls for; corn oil processing and products comprising corn oil and corn meal obtained from corn)
  - IT Glutens
    - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
      - (corn meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)
  - IT Acidity
    - Air
    - Antioxidants
    - Biodegradable materials
    - Bleaching
    - Bread
    - Breakfast cereal
    - Canola
    - Cottonseed
    - Crosslinking agents
    - Deodorization
    - Dietary fiber
    - Feed additives
    - Feeding experiment
    - Food additives
    - Food processing
    - Gallus domesticus
    - Glycine max
    - Helianthus annuus
    - Herb
    - Hordeum vulgare
    - Micelles
    - Nutrients
    - Pigments, biological
    - Rapeseed
    - Rapeseed
    - Solanum tuberosum
    - Sorghum bicolor
    - Spices
    - Thickening agents
    - Vinegar
    - Zea mays
      - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Aldehydes, biological studies
  - Anhydrides
  - Epoxides
    - RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
      - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Amino acids, biological studies
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
    - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Canola oil
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
    - (corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Carotenes, biological studies
  - RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
    - (corn oil processing and products comprising corn oil and corn meal obtained from corn)

STN Columbus

- obtained from corn)
- IT Enzymes, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Fats and Glyceridic oils, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Lipids, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Mineral elements, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Olive oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Palm oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Proteins  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Safflower oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Soybean oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Sterols  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Sunflower oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Tocopherols  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Vitamins  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Corn oil  
RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Flours and Meals  
(corn; corn oil processing and products comprising corn oil and corn meal obtained from corn)
- IT Bos taurus

STN Columbus

(dairy cattle; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Vitamins  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(fat-sol.; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Flours and Meals  
(feather meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Aquaculture  
*Bos taurus*  
*Equus caballus*  
*Poultry*  
*Sus scrofa domestica*  
(feed for; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Catfish  
*Tilapia*  
(feeding; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT *Zea mays*  
(flour and meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Binders  
(for food; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT *Oryza sativa*  
(hulls; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Beverages  
(low calorie; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Feather  
(meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Bone meal  
Meat  
(meat-and-bone meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT *Triticum aestivum*  
(middlings; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Cooking  
(oils for; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Seed  
(oilseed, meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Flours and Meals  
(oilseed; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Fats and Glyceridic oils, biological studies  
Fats and Glyceridic oils, biological studies  
RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(partially hydrogenated; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Feed  
(pet; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Food  
(porridge; corn oil processing and products comprising corn oil and

STN Columbus

corn meal obtained from corn)

IT Bran  
(rice; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Food  
(snack; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Beverages  
(sports; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Fats and Glyceridic oils, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(stearins, oxy-; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Fuel oil  
(substitutes; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Feed  
(swine; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT 7440-37-1, Argon, biological studies 7727-37-9, Nitrogen, biological studies  
RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT 56-87-1, L-Lysine, biological studies 63-68-3, L-Methionine, biological studies 64-17-5, Ethanol, biological studies 67-63-0, Isopropyl alcohol, biological studies 73-22-3, L-Tryptophan, biological studies 77-92-9, Citric acid, biological studies 77-92-9D, Citric acid, monoglyceride derivs. 110-54-3, Hexane, biological studies 121-79-9, Propyl gallate 123-28-4, Dilauryl thiodipropionate 128-37-0, BHT, biological studies 137-66-6, Ascorbyl palmitate 458-37-7, Curcumin 994-36-5, Sodium citrate 1107-26-2,  $\beta$ -Apo-8'-carotenal 6829-55-6, Tocotrienol 7235-40-7,  $\beta$ -Carotene 7647-14-5, Sodium chloride, biological studies 7664-38-2, Phosphoric acid, biological studies 9000-90-2,  $\alpha$ -Amylase 9001-92-7, Protease 9005-25-8, Starch, biological studies 9016-00-6, Dimethyl polysiloxane 9032-08-0, Glucoamylase 25013-16-5, BHA 25395-66-8, Ascorbyl stearate 39413-05-3, Isopropyl citrate  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT 1393-63-1, Annatto  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(ext.; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT 124-38-9, Carbon dioxide, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(supercrit.; corn oil processing and products comprising corn oil and corn meal obtained from corn)

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text

AN 1998:410640 CAPLUS

DN 129:86023

ED Entered STN: 04 Jul 1998

TI Aerosol containing vitamin A or a derivative thereof

IN Thoma, Karl; Rothenberger, Siegfried; Hein, Thomas

PA Hermes Fabrik Pharmazeutischer Praeparate Franz Gradinger G.m.b.H. Co., Germany

SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW  
 DT Patent  
 LA German  
 IC ICM A61K009-12  
 ICS A61K031-07  
 CC 63-6 (Pharmaceuticals)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 848949	A1	19980624	EP 1997-122419	19971218
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19652790	A1	19980625	DE 1996-19652790	19961218
PRAI	DE 1996-19652790		19961218		

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	EP 848949	ICM	A61K009-12
		ICS	A61K031-07

AB Vitamin A-contg. pharmaceutical aerosols for use on the respiratory tract mucosa are provided for treatment of disorders affecting the respiratory epithelium, e.g. neoplasms, metastases, squamous metaplasia, bronchitis, and newborn bronchopulmonary dysplasia. These compns. contain satd. hydrocarbons as solubilizers to improve the aerosolization of the active agent. At low concns., these hydrocarbons do not display the flammability, toxicity, and unpleasant flavor seen at higher concns. Thus, an aerosol prepn. contained retinol palmitate 1.10, DL- $\alpha$ -tocopherol 0.11, tetrafluoroethane 76.71, and isobutane 22.08 wt.%.

ST vitamin A solubilizer hydrocarbon aerosol; inhalant retinol solubilizer isobutane

IT Antitumor agents  
 Propellants (fuels)  
 Solubilizers  
 (aerosol contg. vitamin A or deriv. thereof)

IT Carotenes, biological studies

Retinoids  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(aerosol contg. vitamin A or deriv. thereof)

IT Hydrocarbons, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (aerosol contg. vitamin A or deriv. thereof)

IT Bronchi  
 (bronchitis; aerosol contg. vitamin A or deriv. thereof)

IT Newborn  
 (bronchopulmonary dysplasia in; aerosol contg. vitamin A or deriv. thereof)

IT Lung, disease  
 (bronchopulmonary dysplasia, in newborn; aerosol contg. vitamin A or deriv. thereof)

IT Bronchi  
 Bronchi  
 (carcinoma; aerosol contg. vitamin A or deriv. thereof)

IT Respiratory tract  
 (ciliated epithelium, disorder; aerosol contg. vitamin A or deriv. thereof)

IT Epithelium  
 (ciliated, respiratory tract, disorder; aerosol contg. vitamin A or deriv. thereof)

IT Mucous membrane

STN Columbus

Mucous membrane  
(disease; aerosol contg. vitamin A or deriv. thereof)  
IT Cell differentiation  
(disorder, of tracheobronchial tract; aerosol contg. vitamin A or deriv. thereof)  
IT Poisons, nonbiological source  
(gaseous, tracheobronchial epithelium damage from; aerosol contg. vitamin A or deriv. thereof)  
IT Drug delivery systems  
(inhalants; aerosol contg. vitamin A or deriv. thereof)  
IT Bronchi  
Trachea (anatomical)  
Trachea (anatomical)  
(mucosa, disease; aerosol contg. vitamin A or deriv. thereof)  
IT Respiratory tract  
Respiratory tract  
(mucosa; aerosol contg. vitamin A or deriv. thereof)  
IT Gland  
(mucous, disorder; aerosol contg. vitamin A or deriv. thereof)  
IT Mucous membrane  
Mucous membrane  
(respiratory tract; aerosol contg. vitamin A or deriv. thereof)  
IT Epithelium  
(squamous, disease, metaplasia; aerosol contg. vitamin A or deriv. thereof)  
IT Mucous membrane  
Mucous membrane  
(trachea, disease; aerosol contg. vitamin A or deriv. thereof)  
IT Dust  
(tracheobronchial epithelium damage from; aerosol contg. vitamin A or deriv. thereof)  
IT 68-26-8, Retinol 68-26-8D, Retinol, esters 79-81-2, Retinol palmitate 302-79-4, Retinoic acid 302-79-4D, Retinoic acid, esters 7235-40-7,  $\beta$ -Carotene  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(aerosol contg. vitamin A or deriv. thereof)  
IT 74-98-6, Propane, biological studies 75-28-5, Isobutane 106-97-8, n-Butane, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(solubilizer; aerosol contg. vitamin A or deriv. thereof)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
(1) Boehringer Ingelheim Int; WO 9111496 A CAPLUS  
(2) Glaxo Group Ltd; WO 9311743 A CAPLUS  
(3) Gradinger F Hermes Pharma; EP 0352412 A CAPLUS

=> s grain or fescue or clover or wheat or barley or oats or rye or sorghum or flax or tritica  
273768 GRAIN  
131456 GRAINS  
352360 GRAIN  
(GRAIN OR GRAINS)  
3505 FESCUE  
50 FESCUES  
3514 FESCUE  
(FESCUE OR FESCUES)  
14319 CLOVER  
501 CLOVERS  
14442 CLOVER  
(CLOVER OR CLOVERS)

STN Columbus

114091 WHEAT  
2769 WHEATS  
114186 WHEAT  
(WHEAT OR WHEATS)  
46763 BARLEY  
896 BARLEYS  
46815 BARLEY  
(BARLEY OR BARLEYS)  
13185 OATS  
15109 RYE  
62 RYES  
15120 RYE  
(RYE OR RYES)  
13119 SORGHUM  
343 SORGHUMS  
13147 SORGHUM  
(SORGHUM OR SORGHUMS)  
8663 FLAX  
17 FLAXES  
8668 FLAX  
(FLAX OR FLAXES)  
1923 TRITICALE  
126 TRITICALES  
1931 TRITICALE  
(TRITICALE OR TRITICALES)  
77622 RICE  
461 RICES  
77638 RICE  
(RICE OR RICES)  
4 TRITICALE RICE  
(TRITICALE (W) RICE)  
111199 CORN  
345 CORNS  
111319 CORN  
(CORN OR CORNS)  
442 SPELT  
70 SPELTS  
502 SPELT  
(SPELT OR SPELTS)  
5204 MILLET  
206 MILLETS  
5246 MILLET  
(MILLET OR MILLETS)  
2537 AMARANTH  
25 AMARANTHS  
2547 AMARANTH  
(AMARANTH OR AMARANTHS)  
3511 BUCKWHEAT  
12 BUCKWHEATS  
3513 BUCKWHEAT  
(BUCKWHEAT OR BUCKWHEATS)  
566 QUINOA  
1 QUINOAS  
567 QUINOA  
(QUINOA OR QUINOAS)  
10 KAMUT  
2335 TEFF  
9 TEFFS  
2339 TEFF  
(TEFF OR TEFFS)  
L3 609809 GRAIN OR FESCUE OR CLOVER OR WHEAT OR BARLEY OR OATS OR RYE OR  
SORGHUM OR FLAX OR TRITICALE RICE OR CORN OR SPELT OR MILLET OR

STN Columbus

AMARANTH OR BUCKWHEAT OR QUINOA OR KAMUT OR TEFF

=> 3 and (carotene or carotenoid or lycopene lutein or betatene)  
3 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> s 13 and (carotene or carotenoid or lycopene lutein or betatene)

27960 CAROTENE

20157 CAROTENES

38399 CAROTENE

(CAROTENE OR CAROTENES)

17279 CAROTENOID

22985 CAROTENOIDS

27802 CAROTENOID

(CAROTENOID OR CAROTENOIDS)

4100 LYCOPENE

53 LYCOPENES

4110 LYCOPENE

(LYCOPENE OR LYCOPENES)

5027 LUTEIN

36 LUTEINS

5036 LUTEIN

(LUTEIN OR LUTEINS)

84 LYCOPENE LUTEIN

(LYCOPENE (W) LUTEIN)

13 BETATENE

L4 4094 L3 AND (CAROTENE OR CAROTENOID OR LYCOPENE LUTEIN OR BETATENE)

=> s 14 and (vegetable oil or meadowfoam or peanut or cottonseed or rapeseed or rape seed or m

74343 VEGETABLE

24529 VEGETABLES

85891 VEGETABLE

(VEGETABLE OR VEGETABLES)

688257 OIL

329781 OILS

775486 OIL

(OIL OR OILS)

18323 VEGETABLE OIL

(VEGETABLE (W) OIL)

162 MEADOWFOAM

20918 PEANUT

4944 PEANUTS

22197 PEANUT

(PEANUT OR PEANUTS)

16294 COTTONSEED

428 COTTONSEEDS

16373 COTTONSEED

(COTTONSEED OR COTTONSEEDS)

8261 RAPESEED

183 RAPESEEDS

8302 RAPESEED

(RAPESEED OR RAPESEEDS)

17950 RAPE

67 RAPES

17964 RAPE

(RAPE OR RAPES)

123220 SEED

86209 SEEDS

165907 SEED

(SEED OR SEEDS)

STN Columbus

2185 RAPE SEED  
(RAPE (W) SEED)  
651 MACADAMIA  
3 MACADAMIAS  
651 MACADAMIA  
(MACADAMIA OR MACADAMIAS)  
2573 AVOCADO  
343 AVOCADOS  
2629 AVOCADO  
(AVOCADO OR AVOCADOS)  
14682 PALM  
1143 PALMS  
15071 PALM  
(PALM OR PALMS)  
30243 CASTOR  
15 CASTORS  
30255 CASTOR  
(CASTOR OR CASTORS)  
L5 316 L4 AND (VEGETABLE OIL OR MEADOWFOAM OR PEANUT OR COTTONSEED OR  
RAPESEED OR RAPE SEED OR MACADAMIA OR AVOCADO OR PALM OR CASTOR)  
  
=> s 15 and (thermal or heat?)  
954571 THERMAL  
66 THERMALS  
954600 THERMAL  
(THERMAL OR THERMALS)  
2156456 HEAT?  
L6 36 L5 AND (THERMAL OR HEAT?)  
  
=> d 16 1-36 ti  
  
L6 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Production method for particles containing lipophilic compounds, and  
apparatus therefor  
  
L6 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Edible fat emulsions as food spreads.  
  
L6 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI  $\beta,\beta$ -Carotene and 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline  
mixtures as diesel fuel stabilizers and cetane improvers  
  
L6 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI A strong constitutive promoter from the parsley ubiquitin gene and its use  
in expression of foreign genes in plants  
  
L6 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Cosmetic compositions comprising silicone gels  
  
L6 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Cosmetic compositions comprising silicone gels comprising entrapped,  
occluded or encapsulated pigments  
  
L6 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Optothermal window method for on-line monitoring of decay kinetics of  
trans- $\beta$ -carotene in thermally treated vegetable oils  
  
L6 ANSWER 8 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Purification and characterization of an autoclavable superoxide dismutase  
(SOD) isozyme from Potentilla atrosanguinea, and use of the SOD in  
cosmetic, food and pharmaceutical compositions

STN Columbus

- L6 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Fast quality screening of **vegetable oils** by HPLC-thermal lens spectrometric detection
- L6 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Process for producing **carotenoid** emulsion
- L6 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Ultrasensitive assays of trans- and cis- $\beta$ -carotenes in **vegetable oils** by high-performance liquid chromatography-thermal lens detection
- L6 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Unsaponifiables-enriched **vegetable oil** as food ingredient
- L6 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Encapsulation of sensitive liquid components into a matrix to obtain discrete shelf-stable particles
- L6 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Nutrient intensified oil and its preparing process
- L6 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Diurnal changes of photooxidation response in leaves of C3 and C4 plants
- L6 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Effect of traditional processing practices on the content of total carotenoid,  $\beta$ -carotene,  $\alpha$ -carotene and vitamin A activity of selected Tanzanian vegetables
- L6 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Detection of process components in food process streams by fluorescence
- L6 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Compositions containing water-soluble hemicellulose and natural resins
- L6 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Carotene removal from corn meal
- L6 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Process of obtaining the sea buckthorn oil "aska-tesh"
- L6 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Cream cheese type food
- L6 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Rapeseed** meal in the diet of common carp reared in heated waters. V. Carotenoids in diets and fish tissues
- L6 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Low fat comestible spread
- L6 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Stable clear liquid release agent
- L6 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI The preparation of water-soluble powdered  $\beta$ -carotene and its preservation stability
- L6 ANSWER 26 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Fixing lipophilic substances on starch, starch derivatives, or materials containing them

STN Columbus

- L6 ANSWER 27 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Suitability of some Egyptian clays for bleaching cottonseed oil. III.  
Regeneration of spent clays
- L6 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Margarine oil compositions
- L6 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Preparation of  $\beta$ -carotene
- L6 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Stabilized carotene composition
- L6 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Synthesis of carotene homologs
- L6 ANSWER 32 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI  $\delta$ -Tocopherol. I. Isolation from soybean oil and properties
- L6 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Chemical estimation of vitamin E in vegetable oils
- L6 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Stabilizing cottonseed oil or other glyceridic oils against oxidative deterioration
- L6 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Improving the quality of milk
- L6 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Stabilizing fats and oils against rancidity

=> d 16 7 10 23 24 all

- L6 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
Full Text
- AN 2003:540724 CAPLUS  
DN 139:349781  
ED Entered STN: 15 Jul 2003  
TI Optothermal window method for on-line monitoring of decay kinetics of trans- $\beta$ -carotene in thermally treated vegetable oils  
AU Ganguli, Otto; Bicanic, Dane; Bonifacic, Marija; Nicoli, Maria Cristina; Chirtoc, Mihai  
CS Agrotechnology and Food Sciences, Division of Biophysics, Laser Laboratory for Photoacoustic and Photothermal Research, Wageningen University and Research Centre, Wageningen, 6703 HA, Neth.  
SO European Food Research and Technology (2003), 217(1), 74-79  
CODEN: EFRTFO; ISSN: 1438-2377  
PB Springer-Verlag  
DT Journal  
LA English  
CC 17-1 (Food and Feed Chemistry)  
AB The optothermal window detection method at 488 nm was used to monitor online the concn. of trans- $\beta$ -carotene that was added to several vegetable oils after treating them at 200° in the presence of air for varying amts. of time. Results obtained for extra virgin oil show a direct proportionality between the rate const. describing the disappearance of trans- $\beta$ -carotene and the duration of thermal treatment. The rate const. for the decay of trans- $\beta$ -carotene in oils treated under identical conditions was also dependent on the type of oil. Trends and individual data are discussed in the light of a possible

STN Columbus

application of the method for the detn. of the oxidative stability of vegetable oils.

ST vegetable oil carotene optothermal window photoacoustic spectroscopy

IT Olive oil

RL: AMX (Analytical matrix); ANST (Analytical study)  
(extra virgin; optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -carotene in thermally treated vegetable oils)

IT Photoacoustic spectroscopy

Reaction kinetics  
(optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -carotene in thermally treated vegetable oils)

IT Corn oil

Safflower oil

Sunflower oil

RL: AMX (Analytical matrix); ANST (Analytical study)  
(optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -carotene in thermally treated vegetable oils)

IT Fats and Glyceridic oils, analysis

RL: AMX (Analytical matrix); ANST (Analytical study)  
(vegetable; optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -carotene in thermally treated vegetable oils)

IT 7235-40-7,  $\beta,\beta$ -Carotene

RL: ANT (Analyte); ANST (Analytical study)  
(optothermal window method for online monitoring of decay kinetics of trans- $\beta$ -carotene in thermally treated vegetable oils)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Bicanic, D; Appl Spectrosc 1995, V49, P1485 CAPLUS  
(2) Chen, B; J Agric Food Chem 1994, V42, P2391 CAPLUS  
(3) Doka, O; Anal Chem 2002, V74, P2157 CAPLUS  
(4) Halliwell, B; Crit Rev Food Sci 1995, V35, P7 CAPLUS  
(5) Helander, P; Meas Sci Technol 1993, V4, P178  
(6) Henry, L; J Am Oil Chem Soc 1998, V75, P823 CAPLUS  
(7) Labuza, T; J Am Oil Chem Soc 1969, V46, P409 CAPLUS  
(8) Loliger, J; J Sci Food Agric 1990, V52, P119  
(9) Matthaus, B; J Am Oil Chem Soc 1996, V73, P1039 CAPLUS  
(10) McQueen, D; Anal Chem 1995, V14, P482 CAPLUS  
(11) Minguez-Mosquera, M; J Sci Food Agric 1995, V67, P153  
(12) Pagano, T; Rev Ing Quim 1999, V15, P11  
(13) Pellegrini, N; J Agric Food Chem 2001, V49, P2532 CAPLUS  
(14) Steenson, D; J Am Oil Chem Soc 2000, V77, P153

L6 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text

AN 2002:556118 CAPLUS

DN 137:108618

ED Entered STN: 26 Jul 2002

TI Process for producing carotenoid emulsion

IN Mori, Toshiki; Mimura, Satoshi; Nakatani, Tomonari

PA Kuraray Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM C09K003-00

NCL 516073000

CC 17-4 (Food and Feed Chemistry)

STN Columbus

Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002099102	A1	20020725	US 2002-52456	20020123
	US 6664300	B2	20031216		
	EP 1227082	A1	20020731	EP 2002-166	20020108
	EP 1227082	B1	20040616		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	AT 269301	E	20040715	AT 2002-166	20020108
	CN 1367167	A	20020904	CN 2002-100969	20020110
	JP 2002302479	A2	20021018	JP 2002-13194	20020122
	JP 2002316924	A2	20021031	JP 2002-13195	20020122
PRAI	JP 2001-15267	A	20010124		
	JP 2001-15274	A	20010124		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
------------	-------	------------------------------------

US 2002099102	ICM	C09K003-00
	NCL	516073000
US 2002099102	ECLA	C07C175/00B

AB Disclosed is a process for producing a carotenoid emulsion which comprises heating a suspension of the carotenoid in a high boiling org. liq., by passing the suspension through a conduit of 0.1 to 50 mm inside diam. heated to temp. at 120-700° for a residence time of 0.05 to 5 s or by mixing the suspension with a high boiling org. liq. heated to the range of 120 to 500° for a time of 0.05 to 10 s, to dissolve the carotenoid, and then immediately adding the resulting soln. into an aq. soln. of an emulsifier to emulsify the soln. By this prodn. process, an emulsion contg. a carotenoid as an effective ingredient can be produced with the carotenoid maintaining a high total trans-form proportion, with good productivity, conveniently, and industrially advantageously.

ST carotenoid emulsion prodn process

IT Fatty acids, biological studies

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(C16-18, esters with sucrose, emulsifiers; process for producing carotenoid emulsion)

IT Fatty acids, biological studies

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(C8-14, esters with sucrose, emulsifiers; process for producing carotenoid emulsion)

IT Fatty acids, biological studies

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(castor-oil, esters with sorbitan, emulsifiers; process for producing carotenoid emulsion)

IT Alkali metal compounds

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(emulsifiers; process for producing carotenoid emulsion)

IT Fatty acids, biological studies

RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

STN Columbus

(esters, emulsifiers, of ascorbic acid and sorbitan; process for producing carotenoid emulsion)

IT Corn oil  
Diglycerides  
Edible oils  
Glycerides, biological studies  
Monoglycerides  
Paraffin oils  
Terpenes, biological studies  
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(high boiling org. liq.; process for producing carotenoid emulsion)

IT Antioxidants  
Emulsifying agents  
Emulsions  
(process for producing carotenoid emulsion)

IT Carotenes, biological studies  
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(process for producing carotenoid emulsion)

IT Fatty acids, biological studies  
RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(tall-oil, esters with sorbitan, emulsifiers; process for producing carotenoid emulsion)

IT 137-66-6, Ascorbic acid palmitate 1310-73-2, Sodium hydroxide, biological studies  
RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(emulsifiers; process for producing carotenoid emulsion)

IT 25496-72-4, Monoolein  
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(high boiling org. liq.; process for producing carotenoid emulsion)

IT 472-61-7, Astaxanthin 472-70-8, Cryptoxanthin 514-78-3, Canthaxanthin 3604-90-8, Citranaxanthin 7235-40-7,  $\beta$ -Carotene 12676-20-9, Apocarotenal  
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(process for producing carotenoid emulsion)

L6 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text

AN 1982:508798 CAPLUS  
DN 97:108798  
ED Entered STN: 12 May 1984  
TI Low fat comestible spread  
IN Miller, Donald E.; Werstak, Charles E.  
PA SCM Corp. , USA  
SO Eur. Pat. Appl., 21 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC A23D003-00; A23L001-24; A23C020-00

## STN Columbus

CC 17-9 (Food and Feed Chemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 49705	A1	19820421	EP 1980-106140	19801009
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
PRAI	EP 1980-106140		19801009		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
------------	-------	------------------------------------

EP 49705	IC	A23D003-00IC	A23L001-24IC	A23C020-00
AB	An oil-in-water emulsion suitable for use in the prodn. of low-fat analogs of margarine, mayonnaise, or cheese is prep'd. from an emulsifier, a thickening agent, a fat with a Wiley m.p. of 24-41° and a solid fat index at 35.5° of ≤20 and at 37.5° essentially zero, and optionally flavoring and coloring agents. Thus, water (68.31%) was mixed with Methocel K-100M (hydroxypropylmethyl cellulose) [9004-65-3] (0.5%), Avicel RC 581 (cellulose prepn.) [51395-75-6] (0.5%), and β-carotene (0.09%) with heat; Dur-em 114 emulsifier (monoglycerides) (4.0%), dewaxed corn oil (11.25%), hydrogenated cottonseed-soybean oil (13.75%), and artificial butter flavor (0.1%) were added; the material was homogenized at 1000-2000 psig; salt was added; and the emulsion was cooled, yielding a margarine-like product.			
ST	emulsion food fat; margarine fat low emulsion; cheese substitute emulsion; mayonnaise substitute emulsion			
IT	Soybean oil RL: BIOL (Biological study) (cottonseed oil mixt. with, hydrogenated, food fat-low emulsion contg.)			
IT	Butter substitutes Cheese substitutes Margarine (fat-low, emulsion for)			
IT	Corn oil RL: BIOL (Biological study) (food fat-low emulsion contg.)			
IT	Cottonseed oil RL: BIOL (Biological study) (soybean oil mixt. with, hydrogenated, food fat-low emulsion contg.)			
IT	Mayonnaise (substitutes, fat-low, emulsion for)			
IT	Food (emulsions, fat-low, manuf. of)			
IT	Glycerides, biological studies RL: BIOL (Biological study) (mono-, in food fat-low emulsion manuf.)			
IT	9004-32-4 9004-65-3 51395-75-6 RL: BIOL (Biological study) (in food fat-low emulsion manuf.)			
IT	9004-34-6, biological studies RL: BIOL (Biological study) (microcryst., in food fat-low emulsion manuf.)			

L6 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text

AN 1980:406377 CAPLUS

DN 93:6377

ED Entered STN: 12 May 1984

TI Stable clear liquid release agent

IN Hanson, Harold W., Sr.

PA Par-Way Mfg. Co., USA

SO U.S., 4 pp. Cont.-in-part of U.S. Ser. No. 532,850. abandoned.

## STN Columbus

CODEN: USXXAM  
DT Patent  
LA English  
IC A23D005-00  
NCL 426250000  
CC 17-2 (Foods)  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4192898	A	19800311	US 1978-916116	19780616
	US 4096258	A	19780620	US 1977-772929	19770228
PRAI	US 1974-532850		19741216		
	US 1975-621309		19751010		
	US 1977-772929		19770228		

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	US 4192898	IC	A23D005-00
		NCL	426250000

AB A stable clear pan release agent consists of 0.25-2% by wt. Polysorbate 80 [9005-65-6] in a mixt. of 2 or more oils, the major oil being liq. at room temp., and the minor one being solid at room temp. The oils are agitated at ~74°, rapidly chilled and worked to at least 25°; worked at that temp., and combined with CO<sub>2</sub> propellant to yield an aerosol product. Thus, about half of 2675 lb soybean oil and 1784 lb coconut oil were heated and mixed to 70°, the immersion heaters were cut off, 240 lb double-bleached lecithin was mixed in for 10 min, the balance of the soybean and coconut oils was added followed by 36.9 lb Polysorbate 80, 2.4 lb BEX butter deriv., and 3.8 or β-carotene. The batch was mixed for 3 min, cooled to ~60°, and passed through a 2-stage homogenizer (1000 and 3500 psi, resp.), and cooled to ~38°. The blend was agitated rapidly in a Votator while chilling to ~21°, and then worked with a high-speed paddle mixer. The product was clear and brilliant.

ST pan release agent; cooking utensil release agent

IT Coconut oil

Corn oil

Cottonseed oil

Lecithins, biological studies

Peanut oil

Soybean oil

RL: BIOL (Biological study)

(of cooking utensil release agents)

IT Oils

RL: BIOL (Biological study)

(palm kernel, of cooking utensil release agents)

IT Oils

RL: BIOL (Biological study)

(palm, of cooking utensil release agents)

IT Cooking utensils

(release agents for)

IT 637-12-7 9005-65-6

RL: BIOL (Biological study)

(of cooking utensil release agents)

IT 124-38-9, uses and miscellaneous

RL: USES (Uses)

(propellant, for aerosol cooking utensil release agents)

=> d his

(FILE 'HOME' ENTERED AT 17:00:22 ON 29 OCT 2004)

STN Columbus

FILE 'CAPLUS' ENTERED AT 17:00:37 ON 29 OCT 2004

L1        45 S FUEL AND (VITAMIN E OR TOCOPHEROL)  
 L2        2 S L1 AND CAROTENE  
 L3        609809 S GRAIN OR FESCUE OR CLOVER OR WHEAT OR BARLEY OR OATS OR RYE O  
 L4        4094 S L3 AND (CAROTENE OR CAROTENOID OR LYCOPENE LUTEIN OR BETATENE O  
 L5        316 S L4 AND (VEGETABLE OIL OR MEADOWFOAM OR PEANUT OR COTTONSEED O  
 L6        36 S L5 AND (THERMAL OR HEAT?)

=> s 15 and (vitamin e or tocopherol)  
 176528 VITAMIN  
 49415 VITAMINS  
 195026 VITAMIN  
 (VITAMIN OR VITAMINS)

1802584 E  
 28667 VITAMIN E  
 (VITAMIN(W) E)  
 27205 TOCOPHEROL  
 8044 TOCOPHEROLS  
 29454 TOCOPHEROL  
 (TOCOPHEROL OR TOCOPHEROLS)

L7        107 L5 AND (VITAMIN E OR TOCOPHEROL)

=> s 17 and diesel  
 40979 DIESEL  
 423 DIESELS  
 41029 DIESEL  
 (DIESEL OR DIESELS)

L8        1 L7 AND DIESEL

=> d 18 all

L8        ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN  
Full Text

AN        2003:334695 CAPLUS  
 DN        138:336957  
 ED        Entered STN: 02 May 2003  
 TI        Corn oil processing and products comprising corn oil and corn meal obtained from corn  
 IN        Jakel, Neal T.; Kotowski, Doug; Ingvalson, Joel; Beaver, Michael J.; Ulrich, James F.; Amore, Francis; Tupy, Michael J.; Fox, Eugene J.; Patist, Alexander  
 PA        Renessen, LLC, USA  
 SO        U.S. Pat. Appl. Publ., 25 pp., Cont.-in-part of U.S. Ser. No. 927,836.  
 CODEN: USXXCO  
 DT        Patent  
 LA        English  
 IC        ICM C11C001-00  
 ICS      A21D002-00  
 NCL      554010000; 554020000; 426622000  
 CC        17-9 (Food and Feed Chemistry)  
 Section cross-reference(s): 18, 45, 51, 62  
 FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003083512 US 6610867 US 2002193617 US 6648930 US 2003224496	A1 B2 A1 B2 A1	20030501 20030826 20021219 20031118 20031204	US 2002-47725 US 2001-927836 US 2003-368521	20020115 20010810 20030218
PRAI	US 2000-637843 US 2001-927836	A2 A2	20000810 20010810		

STN Columbus

US 1999-249280	A2	19990211
US 2002-47725	A2	20020115

**CLASS**

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003083512	ICM	C11C001-00
	ICS	A21D002-00
	NCL	55401000; 554020000; 426622000
US 2003083512	ECLA	A23D009/00; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105B; A23L001/30C; C08B030/10; C08L099/00; C11B001/04; C11B001/10; C11B003/00B; C12P007/06; A23D009/007; A23K001/00B2; A23K001/14; A23K001/16G; A23K001/16L; A23K001/18
US 2002193617	ECLA	A23D009/00; C11B001/10; C11B003/00B; C12P007/06; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K110/; A23K001/10C; A23K001/14; A23K001/16G; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06
US 2003224496	ECLA	A23D009/00; A23D009/007; A23J001/14C2; A23K001/00B2; A23K001/04; A23K001/10; A23K001/10C; A23K001/14; A23K; A23K001/16L; A23K001/18; A23K001/18K; A23K001/18L2; A23K001/18N; A23K001/18S; A23L001/10M; A23L001/105; A23L001/30C; B02B001/00; C08B030/10; C08L099/00; C11B001/04; C11B001/06; C11B001/10; C11B003/00B; C12P
AB	Corn oil and corn meal obtained from corn are included in useful products. The corn oil is extd. from the corn to form the corn meal. The corn grain process generally includes the steps of cracking corn grain having a total oil content of from about 3% to 30% by wt. and extg. the corn oil from the cracked corn grain. The corn oil is useful for making nutritionally enhanced edible oil or cooking oil, lubricants, biodiesel, fuel, cosmetics and oil-based or oil-contg. chem. products. The extd. corn meal is useful for making enhanced animal feed rations, snack food, blended food products, cosmetics, and fermn. broth additive.	
ST	corn meal oil manuf feed food fuel cosmetic	
IT	Fats and Glyceridic oils, biological studies RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (animal; corn oil processing and products comprising corn oil and corn meal obtained from corn)	
IT	Food (bars; corn oil processing and products comprising corn oil and corn meal obtained from corn)	
IT	Diesel fuel substitutes (biodiesel; corn oil processing and products comprising corn oil and corn meal obtained from corn)	
IT	Oryza sativa (bran; corn oil processing and products comprising corn oil and corn meal obtained from corn)	
IT	Bakery products Triticum aestivum (byproducts; corn oil processing and products comprising corn oil and corn meal obtained from corn)	
IT	Solvent extraction (continuous; corn oil processing and products comprising corn oil and corn meal obtained from corn)	
IT	Food viscosity (controls for; corn oil processing and products comprising corn oil and corn meal obtained from corn)	
IT	Glutens RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)	

STN Columbus

(corn meal; corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Acidity  
Air  
Antioxidants  
Biodegradable materials  
Bleaching  
Bread  
Breakfast cereal  
Canola  
    Cottonseed  
Crosslinking agents  
Deodorization  
Dietary fiber  
Feed additives  
Feeding experiment  
Food additives  
Food processing  
Gallus domesticus  
Glycine max  
Helianthus annuus  
Herb  
Hordeum vulgare  
Micelles  
Nutrients  
Pigments, biological  
    Rapeseed  
    Rapeseed  
Solanum tuberosum  
    Sorghum bicolor  
Spices  
Thickening agents  
Vinegar  
Zea mays  
    (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Aldehydes, biological studies  
Anhydrides  
Epoxides  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
    (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Amino acids, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
    (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Canola oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
    (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Carotenes, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
    (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Enzymes, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
    (corn oil processing and products comprising corn oil and corn meal obtained from corn)

IT Fats and Glyceridic oils, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

STN Columbus

- (corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Lipids, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Mineral elements, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Olive oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Palm oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Proteins  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Safflower oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Soybean oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Sterols  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Sunflower oil  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Tocopherols  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Vitamins  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Corn oil  
RL: FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological  
study); PREP (Preparation); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)
- IT Flours and Meals  
(corn; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)
- IT Bos taurus  
(dairy cattle; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)
- IT Vitamins  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(fat-sol.; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)
- IT Flours and Meals

STN Columbus

(feather meal; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Aquaculture  
Bos taurus  
Equus caballus  
Poultry  
Sus scrofa domestica  
(feed for; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Catfish  
Tilapia  
(feeding; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Zea mays  
(flour and meal; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Binders  
(for food; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Oryza sativa  
(hulls; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Beverages  
(low calorie; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Feather  
(meal; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Bone meal  
Meat  
(meat-and-bone meal; corn oil processing and products  
comprising corn oil and corn meal obtained from  
corn)

IT Triticum aestivum  
(middlings; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Cooking  
(oils for; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Seed  
(oilseed, meal; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Flours and Meals  
(oilseed; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Fats and Glyceridic oils, biological studies  
Fats and Glyceridic oils, biological studies  
RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL  
(Biological study); USES (Uses)  
(partially hydrogenated; corn oil processing and products  
comprising corn oil and corn meal obtained from  
corn)

IT Feed  
(pet; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Food  
(porridge; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Bran  
(rice; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Food

STN Columbus

(snack; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Beverages  
(sports; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Fats and Glyceridic oils, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(stearins, oxy-; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Fuel oil  
(substitutes; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT Feed  
(swine; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT 7440-37-1, Argon, biological studies 7727-37-9, Nitrogen, biological  
studies  
RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL  
(Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)

IT 56-87-1, L-Lysine, biological studies 63-68-3, L-Methionine, biological  
studies 64-17-5, Ethanol, biological studies 67-63-0, Isopropyl  
alcohol, biological studies 73-22-3, L-Tryptophan, biological studies  
77-92-9, Citric acid, biological studies 77-92-9D, Citric acid,  
monoglyceride derivs. 110-54-3, Hexane, biological studies 121-79-9,  
Propyl gallate 123-28-4, Dilauryl thiodipropionate 128-37-0, BHT,  
biological studies 137-66-6, Ascorbyl palmitate 458-37-7, Curcumin  
994-36-5, Sodium citrate 1107-26-2,  $\beta$ -Apo-8'-carotenal 6829-55-6,  
Tocotrienol 7235-40-7,  $\beta$ -Carotene 7647-14-5, Sodium  
chloride, biological studies 7664-38-2, Phosphoric acid, biological  
studies 9000-90-2,  $\alpha$ -Amylase 9001-92-7, Protease 9005-25-8,  
Starch, biological studies 9016-00-6, Dimethyl polysiloxane 9032-08-0,  
Glucoamylase 25013-16-5, BHA 25395-66-8, Ascorbyl stearate  
39413-05-3, Isopropyl citrate  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(corn oil processing and products comprising corn  
oil and corn meal obtained from corn)

IT 1393-63-1, Annatto  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(ext.; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

IT 124-38-9, Carbon dioxide, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(supercrit.; corn oil processing and products comprising  
corn oil and corn meal obtained from corn)

=> s triticale  
1923 TRITICALE  
126 TRITICALES  
L9 1931 TRITICALE  
(TRITICALE OR TRITICALES)

=> s l9 and corn  
111199 CORN  
345 CORNS  
111319 CORN  
(CORN OR CORNS)  
L10 250 L9 AND CORN

=> s l10 and fuel

STN Columbus

340874 FUEL  
154939 FUELS  
389767 FUEL  
(FUEL OR FUELS)  
L11 2 L10 AND FUEL

=> d 111 ti

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Quality of solid biofuels - database and field trials

=> d 111 2 ti

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Protein byproduct recovery in fuel ethanol processing of agricultural materials

=> d 111 1 all

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
Full Text

AN 1999:713328 CAPLUS  
DN 132:24771  
ED Entered STN: 09 Nov 1999  
TI Quality of solid biofuels - database and field trials  
AU Hartmann, H.; Maier, L.; Bohm, T.  
CS Research Center of Agricultural Engineering, Munich University of Technology, Freising-Weihenstephan, D-85354, Germany  
SO Biomass: A Growth Opportunity in Green Energy and Value-Added Products, Proceedings of the Biomass Conference of the Americas, 4th, Oakland, Calif., Aug. 29-Sept. 2, 1999 (1999), Volume 1, 273-279. Editor(s): Overend, Ralph P.; Chornet, Esteban. Publisher: Elsevier Science, Oxford, UK.  
CODEN: 68IQAG  
DT Conference  
LA English  
CC 52-1 (Electrochemical, Radiational, and Thermal Energy Technology)  
Section cross-reference(s): 11, 40, 60  
AB Quality aspects of solid biofuels were investigated in a new database. Most parameters varied greatly, particularly when annually harvested biomass was considered. For planning purposes the frequency distributions should be used rather than mean values. The quality of some crops may be changed by modified agricultural practices. Rainfall shortly after cutting can deplete chlorine and potassium in grass by 60 to 80%.  
ST solid biofuel quality database field trial; fuel gas manufg solid biofuel  
IT Fuels  
(biofuels, solid; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)  
IT Beech (Fagus)  
Miscanthus  
Spruce (Picea)  
Wheat straw  
(chlorine content of solid biofuel, from database)  
IT Straw  
Straw  
(corn; chlorine content of solid biofuel, from database)  
IT Bagasse  
Bark  
Compost

STN Columbus

Databases  
Grass (Poaceae)  
Hay  
Leaf  
Straw  
(field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Fibers  
RL: NUU (Other use, unclassified); USES (Uses)  
(field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Mineral elements, occurrence  
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)  
(frequency distribution, selected quality parameters, similar cereal straw types, from database)

IT Wood  
(natural, processed; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Leaf  
(needle; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Calorific value  
(net; frequency distribution, selected quality parameters, similar cereal straw types, from database)

IT Flours and Meals  
(oilseed cakes; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Seed  
Seed  
(oilseed, meal; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Flours and Meals  
(oilseed; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Fruit  
(pips; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Fermentation  
(products, pomace; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Straw  
Straw  
(rape; chlorine content of solid biofuel, from database)

IT Straw  
Straw  
(rye; chlorine content of solid biofuel, from database)

IT Nut (seed)  
(shells; field trials of solid biofuel quality and database of identity, age, origin, fuel characteristics, element and compd. content, testing methodol., related literature)

IT Poplar (Populus)  
Willow (Salix)  
(short rotation forestry; chlorine content of solid biofuel, from

STN Columbus

```

        database)
IT   Corn
    Corn
    Rape (plant)
    Rape (plant)
    Rye
    Rye
    Sunflower
    Sunflower
    Triticale
    Triticale
        (straw; chlorine content of solid biofuel, from database)
IT   Straw
Straw
        (sunflower; chlorine content of solid biofuel, from database)
IT   Straw
Straw
        (triticale; chlorine content of solid biofuel, from database)
IT   Rye
    Triticale
Wheat
        (whole crop; chlorine content of solid biofuel, from database)
IT   7782-50-5, Chlorine, occurrence
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
        (chlorine content, solid biofuels)
IT   7704-34-9, Sulfur, occurrence
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
        (effect of harvesting date and field retention time, selected quality
         parameters in grass, from database)
IT   7440-09-7, Potassium, occurrence  7727-37-9, Nitrogen, occurrence
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
        (frequency distribution, selected quality parameters, similar cereal
         straw types, from database)

```

=> log y			
COST IN U.S. DOLLARS	SINCE FILE	TOTAL	
	ENTRY	SESSION	
FULL ESTIMATED COST	138.86	139.07	
 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL	
	ENTRY	SESSION	
CA SUBSCRIBER PRICE	-5.60	-5.60	

STN INTERNATIONAL LOGOFF AT 17:18:30 ON 29 OCT 2004